Implementation of Data Mining using E- commerce Application

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*Abstract:*The increase in technology helped every individual to access web that has been a big trend to represent data as a source of information and essential in the various fields of research especially in the electronic commerce. The contents of an organizational data are stored in a particular company website and the information is extracted from e-commerce websites with the help of big data and data mining techniques. Electronic commerce includes all commercial transactions taking place remotely through Internet from various types of terminals such as computers, smart phones. The security is an essential part of any transaction that takes place while using internet. The requirements for safe transactions include confidentiality, integrity, availability, authenticity, non-reputability, encryption and auditability. This paper includes the major tasks performed in Data Mining, Concept of Data Mining in paytm application and major security measures for security.

*Keywords:*electronic commerce, confidentiality, integrity, availability, authenticity, non-reputability, encryption and auditability

I. INTRODUCTION

We know that the main objective of company is to gain profits. They need to attract customers. In the previous years, traditional marketing is the only way to achieve goal of the organization. Nowadays new innovations in technology made huge data to be stored in the internet which is termed as big data which can identify the customers transactions over online processes time to time using certain company websites. Organizations use online applications for marketing to provide easy access to customers in order to gain revenue of organizations. Customers are provided online access to websites for the selection of desired products in electronic marketing. The data mining techniques are used to analyze data placed in company website from big data whenever necessary to retrieve information regarding customer's details and transactions performed by them in a period of time. The webpage is easily designed by the company for the benefit of customers as well as to gain revenue.

II. TASKS PERFORMED IN DATA MINING

A. Description

The first task involved in Data Mining is to describe complex data base which means to provide explanation for the given data base . For example, Every time a customer calls to the Customer Care Centre, the record of call duration in minutes, total number of calls and purpose of the call and so on is5 to be maintained for reference.

B. Classification

The second task involved in Data Mining is Classification which includes object, class and attributes. Object is an instance of a class. The collection of objects is represented as a class. The class of an object based on its properties is termed as classification. For example, Consider a company website with several objects and classes based on certain attributes to attract customers in electronic commerce applications.

C. Classification

The third task involved is clustering method. It means the process of grouping similar characteristics separately from unidentified groups where every group formed is represented as a cluster. For example, Customers with similar type of interests in accessing branded items can be formed as subgroup or frequent users accessing the website can be grouped as a cluster and so on.

Note : Hence sub groups formed are not predetermined as in the case of classification.

D. Association Rules

The fourth task involved is Association Rules in Data Mining. The rules used to identify the relationship between the set of objects in database with other set of related objects is known as Association Rules. For example, Customer register in a particular website for the first time by entering their details and the data is then stored in database. From the next time Customer can visit the same website and gain access with

304

username and password to login easily by checking with its database and process desired information.

E. *Prediction*

The fifth task involved in Data Mining is Prediction which means to guess the future results. For example, Predicting the commercial value of the stock two or three months before releasing into the electronic market in the future.

III. CONCEPT OF DATA MINING IN PAYTM APPLICATION

Paytm was founded and incubated by One97 Communications Limited in 2010 as a prepaid mobile recharge website. Then Paytm wallet was established in 2013 which became India's largest mobile payment service platform with over 150 million wallets and 75 million Android based app downloads as of November 2016. The service was largely due to the demonetization of the 500 and 1000 rupee currency notes. After 8 November 2016, Paytm's transactions and profit increased significantly. Paytm received a license from Reserve Bank of India to start one of India's first payments bank, called "Paytm Payments Bank Limited" in 2015. At the time, the bank intended to use Paytm's existing user base for offering new services, including debit cards, savings accounts, online banking and transfers, to enable a cashless economy.

Data mining is important in creating a great experience at paytm application used in android OS. Data mining is a systematic way of extracting information from resided data. For paytm, data mining plays an important role. In the Home Page, at the top of the screen one can find paytm menu, search and paytm bag options in the left and right hand sides respectively.

Paytm menu includes the following submenus:
1. Recharge or Pay for : Example - Gas, Electricity
2. Book on paytm : Example – Bus, Movies
3. Shop on paytm : Example – Clothing, Smartphones
4. Offers
5. Gold
6. Movie Tickets
7. Mobile Recharge
8. Flight Tickets
9. International Hot Sellers
10. Upgrade to iphone

In the home page, at the bottom of the paytm application one can find home, mail, profile and updates options available for the benefit of the user to extract the data related to the paytm account which is efficient and accurate.

IV. PAYTM – AN EXAMPLE FOR E- COMMERCE

Paytm is an acronym for "Pay Through Mobile". It is an Indian electronic payment and e-commerce brand based out of Delhi NCR, India. Launched in August 2010. It is the

consumer brand of parent One97 Communications. It also operates the Paytm payment gateway and the Paytm Wallet.

A. *Services and Products*

Service is available through a browser, and an app is available on the Android, Windows and iOS operating systems. Paytm is also approved as an operating unit for integrated bill payment system Bharat Bill Payment System, allowing multiple payment modes for consumers.

B. *Paytm Wallet*

The Paytm Wallet application enables users to book air tickets and taxis, mobile recharge, and payment of DTH, broadband and electricity bills among others. The money transfer feature is only available for mobile users, not for desktop. Users can also pay for fuel at Indian Oil. Petrol pumps and so on through the wallet.

C. *Products*

A whole lot of products can be bought from PayTM in categories including electronics, home appliances, mobile phones, clothing with good cashback scheme for users which made customers attract to the paytm application.

V. MAJOR SECURITY MEASURES

A. *Encryption*

It is a very practical way to safeguard the data being transmitted over the network. Sender encrypt the data using a secret code and receiver specified only can decrypt the data using the same or different secret code.

B. *Digital Signature*

It ensures the authenticity of the information. A digital signature is a e-signature authentic authenticated through encryption and password.

C. *Security Certificates*

It is unique digital id used to verify identity of an individual website or valid user.

VI. CONCLUSION

Nowadays business is growing very rapidly due to the increase of technology, there is a need to provide benefits to the customers from various organizations. Hence many applications are been development in the market by various organisations for different types of customers. One of the application is discussed in this paper which is an efficient way to process several transactions in a single application provided internet connection is established which saves time of the Customer as well as the Producer when compared with traditional marketing. Number of options are available to the users provided in different applications and the interested

website can be utilized by the customers by considering security and efficiency for the used application. The accuracy is measured in terms of proper channel of availability of different transactions at a single page and single click at a specific application which is easy to use for anyone using internet connection. The more data you collect from customers…the more value you can deliver to them. And the more value you can deliver to them…the more revenue you can generate.

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